

REMARKS

Claims 1 and 19 have been amended. Claims 28-37 were allowed. Applicant respectfully thanks the Examiner for the allowed claims.

In the office action dated Dec. 11, 2003 for application 09/779,373 that was received by the Applicant, pages from this office action appear to have been accidentally mixed with pages from an office action dated Dec. 12, 2003 for application 09/792,877 received by the Applicant. Applicant requests that the file wrappers for both of these applications be checked to determine if this error has been repeated in the file histories.

Rejections Under 35 U.S.C. § 102

Claims 1-4, 15-21, 26 and 27 are rejected under 35 U.S.C. § 102(a) as being anticipated by Yamamuro.

Claims 1-18, as amended, recite a device for converting between electrical energy and mechanical energy with "a first portion of the at least one electroactive polymer, the first portion arranged in a manner which causes the first portion to deform in response to a change in electric field provided by the at least two first active area electrodes and/or arranged in a manner which causes a change in electric field in response to deformation of the first portion, a structure coupled with the electroactive polymer for transferring mechanical input energy to the first portion wherein the device is arranged such that deformation of the first portion in response to a change in electric field and/or deformation of the first portion causing a change in electric field is at least partially assisted by the mechanical input energy."

Claims 19-27, as amended, recite a device for converting between electrical energy and mechanical energy with a first portion of the at least one electroactive polymer, the first portion arranged in a manner which causes the first portion to deform in response to a change in electric field provided by the at least two first active area electrodes and/or arranged in a manner which causes a change in electric field in response to deformation of the first portion, one or more structures coupled with the first portion for communicating elastic energy to or from the first portion; wherein the at least one electroactive polymer is arranged such that elastic potential energy of the device, which is the sum of the elastic energy in the device, is substantially independent of

deformation of the first portion in response to a change in electric field and/or deformation of the first portion causing a change in electric field.

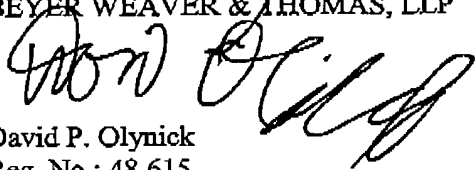
Yamamuro does not teach or suggest "a structure coupled with the electroactive polymer for transferring mechanical input energy to the first portion wherein the device is arranged such that deformation of the first portion in response to a change in electric field and/or deformation of the first portion causing a change in electric field is at least partially assisted by the mechanical input energy" or "one or more structures coupled with the first portion for communicating elastic energy to or from the first portion; wherein the at least one electroactive polymer is arranged such that elastic potential energy of the device, which is the sum of the elastic energy in the device, is substantially independent of deformation of the first portion in response to a change in electric field and/or deformation of the first portion causing a change in electric field." In Yamamuro, the deformation of a portion of the piezoelectric material is not partially assisted by mechanical input energy. Further, in Yamamuro, the elastic potential energy of the devices is not described. Therefore, for at least these reasons, Yamamuro can't be said to anticipate claims 1-4, 15-21, 26 and 27 and the rejection is believed overcome thereby.

Claims 1-27 are rejected under 35 U.S.C. § 102(a) as being anticipated by Porat, Billet or Itagaki. The piezoelectric devices of these references do not teach or suggest "a structure coupled with the electroactive polymer for transferring mechanical input energy to the first portion wherein the device is arranged such that deformation of the first portion in response to a change in electric field and/or deformation of the first portion causing a change in electric field is at least partially assisted by the mechanical input energy" or "one or more structures coupled with the first portion for communicating elastic energy to or from the first portion; wherein the at least one electroactive polymer is arranged such that elastic potential energy of the device, which is the sum of the elastic energy in the device, is substantially independent of deformation of the first portion in response to a change in electric field and/or deformation of the first portion causing a change in electric field." In Porat, Billet or Itagaki, the deformation of a portion of the piezoelectric material is not partially assisted by mechanical input energy. Further, in Porat, Billet or Itagaki, the elastic potential energy of the devices is not described. Therefore, for at least these reasons, Porat, Billet or Itagaki can't be said to anticipate claims 1- 27 and the rejection is believed overcome thereby.

CONCLUSION

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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